

REMARKS/ARGUMENTS

Favorable reconsideration of the above-identified patent application, in light of the above amendments and the following remarks is respectfully requested. The presently pending claims are claims 1-11 and 15-19. Claims 1, 9, 11, 15, and 19 have been amended. Claim 20 has been added.

In the Office Action, the Examiner rejected claims 1-11 and 15-19 under 35 U.S.C. 101 because the claimed invention is not supported by either a specific asserted utility or a well established utility. The Examiner stated that the plasma beam "striking" the magnet to produce dispersion loops so as to be captured by acceleration tubes and create an attractive force to propel the magnet and vehicle forward was not supported. The Examiner also invited the Applicant to submit a working model to overcome the rejection. The Applicant does not have a working model of the invention. However, a working model is not required.

In response, the Applicant respectfully disagrees. In *In re Langer*, 503 F.2d 1380, 183 USPQ 288 (C.C.P.A. 1974), the CCPA outlined the general method by which the Patent Office is to examine patent applications with respect to utility:

As a matter of Patent Office practice, a specification which contains a disclosure of utility which corresponds in scope to the subject matter sought to be patented must be taken as sufficient to satisfy the utility requirement of Section 101 for the entire claimed subject matter unless there is reason for one skilled in the art to question the objective truth of the statement of utility or its scope. Assuming that sufficient reason to question the statement of utility and its scope does exist, a rejection for lack of utility under Section 101 will be proper on that basis; such a rejection can be overcome by suitable proofs indicating that the statement of utility and its scope as found in the specification are true. *Id.* at 1391, 183 USPQ at 297.

Thus, with regard to proof of the utility and operability of inventions, the Patent Office generally assumes that an invention is operable as disclosed. The burden of proving operability and utility shifts to the applicant only if there is a reasonable doubt as to the truth of the applicant's assertions. *Ex parte Krenzer*, 100 USPQ 227, 228 (Pat. Off. Bd. App. 1978).

In order to meet the utility requirement, a new product or process that is claimed in an application must be shown to be "operable," or "capable of being used to effect the object proposed." *Mitchell v. Tilghman*, 86 U.S. (19 Wall.) 287, 396 (1873). The focus of the inquiry is on the claimed invention. There is no such thing as a claimed invention having insufficient utility. Utility is an all or nothing rule; either the claimed invention has some utility or beneficial function, or it does not. *National Slug Rejectors, Inc. v. A.B.T. Mfg. Corp.*, 164 F.2d 333, 335, 75 USPQ 1511, 153-154 (7th Cir. 1947), cert. Denied, 333 U.S. 832 (1948). As stated by one court:

A small degree of utility is sufficient. The claimed invention must only be capable of performing some beneficial function... An invention does not lack utility merely because the particular embodiment disclosed in the patent lacks perfection or performs crudely... A commercially successful product is not required... Nor is it essential that the invention accomplishes all its intended functions... or operate under all conditions... partial success being sufficient to demonstrate patentable utility. *E.I. Du Pont de Nemours & Co. v. Berkley & Co.*, 620 F.2d 1247, 205 USPQ 1, 10 n. 17 (8th Cir. 1980).

In addition, the Applicant is submitting Exhibit A, a published paper by Peter Dobias and John C. Samson, entitled "Nonlinear Instabilities in Magnetized Plasmas: A Geometrical Treatment." Exhibit A provides a discussion on magnetized plasmas. In the discussion (see section 6.2), the authors address how the magnetic fields, after being extended, attempt to return to a normal

state (i.e., return back to a dipolar state). This phenomena of the dispersion loops to a normal state creates an attractive force because the magnet and the dispersion loops seek the dipolar state (normal state). In the Applicant's invention, the particle acceleration tubes serve not only to guide the charged dispersion loops, but also to elongate them beyond their normal configuration. The tendency of the loops to "shrink" to their original size after exiting the tubes provides the attractive force. Exhibit A discusses this phenomena in that if dispersion loops (magnetic fields) are artificially elongated, the loops return to their original configuration (shrink) after the effect causing the dispersion loops to artificially be elongated (i.e., the particle acceleration tubes) was no longer in operation (e.g., exiting the tubes). Thus, the perpetual elongating of the dispersion loops through the tube and the opposing open tendency to shrink back the dispersion loops to the original size provides the attractive force. This attractive force is captured and utilized by transforming the attractive force between the dispersion loops and magnet to kinetic energy by moving the magnet and vehicle toward the elongated dispersion loop. Therefore, the withdrawal of the rejection and the allowance of claims 1-11 and 15-19 is respectfully requested.

The Examiner also rejected claims 1-11 and 15-19 under 35 U.S.C. 112, first paragraph. The Examiner stated that since the claimed invention is not supported by either a specific asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention. The Examiner further stated that he fails to see how the exiting of the dispersion loop from the tube somehow creates an attractive force to propel the magnet and vehicle forward.

In response, the Applicant respectfully disagrees. As discussed above and in Exhibit A, an attractive magnetic force seeks to return to a normal state. If the magnetic force is large enough, the magnet and attached vehicle are pulled forward toward the dispersion loop in an effort to reach a normal state.

The Examiner stated that the drawings are simplistic and do not seem to disclose the detail workings of the invention. The Applicant respectfully disagrees. Although the drawings may not be detailed, the drawings and specification clearly show the operation of the invention. The dispersion loops are guided outwardly by the acceleration tubes in front of the magnet. The dispersion loops then seek to return to a normal state, creating an attractive force between the dispersion loops and the magnet. This attractive force provides the force necessary to move the magnet and vehicle.

In addition, the Examiner stated that the dispersion loops reverse polarity at a time interval and requested to know how this was done. The dispersion loop reversal in polarity is merely a natural phenomenon occurring with the dispersion loops at a specific time interval dependent on the strength of the dispersion loop. There is no external intervention causing the reversal in polarity.

The Examiner also questioned the plasma beam being directed into the magnet. The Examiner also stated that "How can this be? Isn't the plasma beam suppose to strike the magnet?" In response, the Examiner is correct in stating that the plasma beam strikes the magnet. By directing the plasma beam at the magnet, the plasma beam strikes the magnet.

The Examiner also stated that he fails to see what element 52 in FIG. 2 is and does. As clearly stated in the specification in paragraph 21, the dispersion loops are naturally drawn toward

a magnetic source (magnet 12). The loops 52 are dispersion loops which naturally occur, prior to any diversion of the loops by the acceleration tubes. Loops 52 are merely shown to illustrate how the dispersion loops naturally behave without intervention of the acceleration tubes to guide the loops. Therefore, the withdrawal of the rejection and the allowance of claims 1-11 and 15-19 is respectfully requested.

The Examiner also rejected claims 1-11 and 15-19 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner stated that the claim element of "a vehicle" is incorrect in the drive system. In response, the Applicant has amended claims 1, 9, 11, 15, and 19 to delete the element of a vehicle as part of the drive system.

The Examiner also rejected claims 1-11 and 15-19 under 35 U.S.C. 10-3(a) as being unpatentable over U.S. Patent No. 6,334,302 to Chang-Diaz (Chang-Diaz) or U.S. Patent No. 6,118,193 to Morris (Morris) in view of the admitted prior art (page 9, paragraph 0021). The Examiner stated that Chang-Diaz or Morris discloses a drive system in a vehicle having a magnet, dispersion loops reversing polarity, and an ignition to produce plasma to "strike the magnet" but is silent on the dispersion tubes. The Examiner further stated that it would have been obvious to one skilled in the art at the time the invention was made to have used curved particle acceleration tubes in Chang-Diaz or Morris' system as taught by the admitted prior art to create a safer and more reliable system so that the Chang-Diaz or Morris system can last longer and have more power.

In response, the Applicant respectfully disagrees. Chang-Diaz discloses a plasma generator, a controllable heater for selectably raising a temperature of the plasma connected to an outlet of the

plasma generator and a nozzle connected to an outlet of the heart, through which heated plasma is discharged to provide thrust. Chang-Diaz also discloses using a radially diverging magnetic field disposed on a discharged side of the heater so that helically traveling particles in the heater exit the heater at high axial velocity. Chang-Diaz specifically utilize magnets to direct the plasma stream outwardly from the engine (Col. 4, lines 30-40; Col. 4, lines 59-65; Col. 5, lines 14-16; Col. 5, lines 49-65).

On the other hand, the Applicant's invention utilizes a plasma stream that strikes the magnet. The striking of the magnet with a plasma stream induces dispersion loops. The dispersion loop is directed outwardly by an acceleration tube located in front of a magnet. The dispersion loop provides an attractive force which attracts the magnet forward. Chang-Diaz do not teach or suggest striking the magnet or redirecting the dispersion loop away from the magnet. Chang-Diaz merely utilize magnets to direct a plasma outflow from the engine. The Applicant's invention does not direct a plasma exhaust to propel a vehicle. Rather, the Applicant's invention utilizes a plasma stream to create dispersion loops. Clearly, Chang-Diaz does not teach or suggest using a plasma stream to strike a magnet to create dispersion loops or direct dispersion loops to create *an attractive force* away from the magnet.

For prior art references to be combined to render obvious a subsequent invention under Section 103, there must be something in the prior art as a whole which suggests the desirability, and thus the obviousness, of making the combination. *Uniroyal v. Rudkin-Wiley*, 5 U.S.P.Q.2d 1434, 1438 (Fed. Cir. 1988). The teachings of the references can be combined only if there is some suggestion or incentive in the prior art to do so. *In re Fine*, 5 U.S.P.Q.2d at 1599. Hindsight is

strictly forbidden. It is impermissible to use the claims as a framework from which to pick and choose among individual references to recreate the claimed invention. *Id.* At 1600; *W.L. Gore*, 220 U.S.P.Q. at 312. Moreover, the mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 23 U.S.P.Q.2d 1780, 1783 (Fed. Circ. 1992); *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

In regards to Morris, Morris discloses an electromagnetic machine having an inertia ring disposed within an outer casing. The inertia ring rotates freely relative to the outer casing. The outer casing supports a pair of primary coils. The inertia ring also includes a plurality of secondary magnetic coils. The primary coils are energized to attract the secondary coils on one side while repelling the secondary coils on the other side to impart a rotation movement to the inertia ring relative to the outer casing. Specifically, Morris discloses using the attraction and/or repulsion between a primary coil and a plurality of secondary coils to impart rotational movement to a ring relative to the primary coil.

However, the Applicant's invention utilizes a plasma stream which strikes the magnet to create a dispersion loop. The dispersion loop is directed out from the magnet. The dispersion loop creates an attractive force which is used to propel a magnet and attached vehicle. Morris does not teach or suggest utilizing a plasma stream to strike a magnet to create a dispersion loop or directing the dispersion loop in front of the magnet. Morris merely discloses the use of an electromagnet which provides a rotational movement in an inertial ring (Col. 2, lines 23-58; Col. 6, lines 41-67; Col. 7, lines 1-17). Clearly Morris does not provide any suggestion of the key elements of the

Applicant's invention. Therefore, the withdrawal of the rejection and the allowance of claims 1-11 and 15-19 is respectfully requested.

CONCLUSION

For all the above reasons, the Applicant respectfully requests the reconsideration and withdrawal of the rejection and the allowance of claims 1-11 and 15-19.

Respectfully submitted,



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